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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FREEMAN, JOHN D

ART UNIT

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1787

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,299	Applicant(s) YOSHIDA ET AL.	
	Examiner John Freeman	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,9 and 12-28 is/are pending in the application.
- 4a) Of the above claim(s) 16-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,9,12-15 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 1-2, 4-5, 7, 12-15, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 5,856,017) in view of Kajimaru et al. (US 2002/0061959), Additives for Plastics Handbook (Murphy, 2nd ed.) and Ishikawa et al. (EP 0789051).
2. Regarding claims 1 and 2:
3. Matsuda discloses a film having excellent gas barrier and retorting properties (col 1 ln 11-15). The gas barrier film comprises a plastic film of polyester (col 3 ln 18-29). Thereon Matsuda deposits an inorganic thin film (col 3 ln 38-53) having a thickness of 50-8000 Angstroms, more preferably 70-5000 Angstroms, and most preferably 100-3000 Angstroms (col 6 ln 51-54). Matsuda teaches further organic layers can be laminated onto the thin film (col 8 ln 10-12). The film is printable (col 6 ln 64-65).
4. Matsuda is silent with regard to a polyester having the presently disclosed glass transition temperature, molecular weight, and hydroxyl value used on top of the inorganic thin film.
5. Kajimaru discloses a polyester resin having high waterproofness, and useful as a coating [0001-4]. The polyester resin has a hydroxyl value of less than 30mg KOH/g [0035] and a weight average molecular weight of 9,000 or more [0009]. Kajimaru discloses the polyester resin has glass transition temperatures in the range of 40-100°C, thereby overlapping with Applicant's range [0036]. Example embodiments of the resin have glass transition temperatures within the range claimed by Applicant (p10, Table 1). As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges disclosed by the prior art", a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The examiner notes Kajimaru's polyester resins comprise terephthalic acid, isophthalic acid, ethylene glycol, and neopentyl glycol [0122], just as Applicant discloses in Example 1 (p31 of the present specification).
6. Kajimaru teaches the use of polyisocyanate curing compounds that also improve the water proofness, solvent resistance, and processing properties of the polyester [0088].
7. Kajimaru is silent with regard to the ratio of isocyanate to the hydroxyl value of the polyester.

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8. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use an isocyanate curing compound in the polyester to improve processing, and waterproofness, and also keep the hydroxyl value of the isocyanate approximately the same as the value of the polyester to ensure the waterproof property of the layer.

9. Furthermore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use Kajimaru's polyester resin with the gas-barrier taught by Matsuda to improve the waterproof qualities of the barrier.

10. Matsuda and Kajimaru are silent with regard the addition of fatty amide components.

11. These components were well known additives for synthetic resins. For example, Additives for Plastics Handbook discloses fatty amides are suitable mold release agents, slip agents, antiblocking agents, and dispersants (p434). The Handbook also notes stearamide is "particularly compatible in polyester film manufacture" (p434). As another example, Ishikawa discloses a polyester laminate wherein the aqueous polyester comprises a fatty amide, e.g., stearamide, to improve the adhesion, slipperiness, and blocking resistance (p4, ln 1-24). Suitable amounts are 2-10% by weight of the coating layer.

12. At the time of the invention, it would have been obvious to one of ordinary skill in the art to add fatty amides, such as stearamide, in an amount of 2-10% by weight to the polyester of Matsuda and Kajimaru to improve the slip, anti-blocking, and adhesion properties of the polyester.

13. Matsuda's examples show oxygen permeability properties as presently claimed (see Tables 1+). Although Matsuda is silent with regard to the water permeability of the laminate, the examiner takes the position the laminate of Matsuda in view of Kajimaru intrinsically meets said permeability given the laminate is the same as presently claimed.

14. Regarding claim 7:

15. The inorganic material is applied via either physical or chemical vapor depositions (col 6 ln 67+). Oxides of aluminum and silicon can be used (col 3 ln 49).

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16. Regarding claims 13 and 15:

17. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claims 13 and 15.

18. Regarding claim 28:

19. Matsuda teaches an anchor coat can be used (col 6 ln 61).

20. Regarding claim 12:

21. The present claim is written in a product-by-process format. Given the final product of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claims, the examiner takes the position the final product would be indistinguishable from the product presently claimed.

22. Regarding claim 14:

23. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claim 14.

24. Regarding claims 25-27:

25. The present claims are written in a product-by-process format. Since the laminate created by the combination of Matsuda with Kajimaru comprises the same layers as Applicant discloses in the present claim, the examiner takes the position that the laminate would intrinsically possess the properties as described in the present claims 25-27.

26. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (US 5,856,017) in view of Kajimaru et al. (US 2002/0061959), Additives for Plastics Handbook (Murphy, 2nd ed.) and Ishikawa et al. (EP 0789051) as applied to claims 1-2, 4-5, 7, 12-15, and 25-28 above, and further in view of Murai et al. (US 5,853,862).

27. Matsuda in view of Kajimaru is previously described.

28. Both references are silent with regard to an anchor coat as presently claimed.

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29. Anchor coats containing polyester were known at the time of the invention. For example, Murai discloses an anchor coat used to secure an inorganic film to a base film, wherein the anchor coat comprises a polyester (col 3 ln 32-54). The anchor coat provides improved adhesion and gas barrier properties, even after retort treatment (col 3 ln 22-31).

30. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use the polyester-containing anchor coating taught by Murai in the gas barrier taught by Matsuda and Kajimaru to improve adhesion and gas barrier properties.

Claim Rejections - 35 USC § 112

31. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

32. Claims 14 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

33. Claims 14 and 15 recite the adhesion strength between various layers is "150 g/15 mm".

Applicant points to Example 1 of the specification for support of this language. However, while the specification provides support for a specific example having this adhesive strength, it is not clear that this single specific example provides support for all embodiments having the narrower range than the broadly disclosed (and originally claimed) adhesive strength of 100 g/15 mm.

Response to Arguments

34. Applicant's arguments filed 28 Feb 2010 have been fully considered but they are not persuasive.

35. Applicant provides data to show technical advantages can be attained by the incorporation of fatty amide and polyisocyanate into the polyester (p9).

36. The examiner appreciates the lengths Applicant has gone to provide the data, but does not find the data persuasive.

37. First, the prior art recognizes the criticality of the fatty amide and polyisocyanate. Kajimaru, which discloses the presently claimed polyester, teaches the use of polyisocyanate as a curing agent and notes numerous properties are improved by its incorporation. Also, fatty amide components were well known additives as explained by the Additives for Plastics Handbook and Ishikawa, and therefore the addition of such components would have been obvious to one of ordinary skill in the art.

38. Furthermore, the data presented are not commensurate in scope with the present claims. The present claims are drawn broadly to encompass a polyester having any chemical identity as long as it has specific properties with fatty amide and polyisocyanate added thereto, each with a range of amounts to add. The data, however, presents only a specific polyester and shows only the criticality of a single amount for each of the additives. For example, the claims recite a fatty amide in amounts of 0.1-20 parts by weight, but the present example only shows the criticality of 2 parts by weight in comparison to 0 parts by weight.

Conclusion

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed,

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and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 9:00-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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